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AGRICULTURAL DIVERSIFICATION IN SMALL ISLAND STATES: THE MARKETING DILEMMA

Hannah Clarendon
Dominica Export Import Agency, P.O. Box 173
Roseau, Commonwealth of Dominica

ABSTRACT

Agricultural diversification has been promulgated by planners to allow the farmer to spread his risk and to increase the foreign exchange earnings of the country. But it has become evident that the mere addition of other crops will not allow either of these two objectives to be met due to the decline in that sector. The decline is because some of the crops have attained their maximum growth. Profits to be derived is dwindling with a resultant reduction in the production base and, coupled with low productivity, the income to be derived is even lower. Both traditional and nontraditional export crops are similarly affected. Whereas some of the new crops are still in their growth phase, there is a narrow production base and limited market access. The paper seeks to analyze the diversification thrust in Dominica and offers alternatives for a successful program.

INTRODUCTION

Agricultural diversification has been promulgated by planners to allow the farmer to spread his risk and to increase the foreign exchange earnings of the country. But it has become evident that the mere addition of other crops will not allow either of these two objectives to be met due to the general decline in that sector. The decline is due to the fact that some of the crops have attained their maximum growth. Profits to be derived are dwindling with a resultant reduction in the production base and where coupled with low productivity the income to be derived is even lower. Both traditional and non-traditional export crops are similarly affected. Whereas some of the new crops are still in their growth phase there is a narrow production base and limited market access. The paper seeks to analyze the diversification thrust in Dominica and offers alternatives for a successful program.

Dominica is a small English speaking island situated between the French Overseas Departments (FODs) of Martinique and Guadeloupe. The island measures about 753 sq kilometers or 300 sq miles and is very mountainous with the highest peak being 4774 ft. There is a sharp difference in rainfall between the Windward and Leeward coasts. Rainfall ranges from 100 mm or 5 inches on the dry Leeward coast to 8,000 mm or 400 inches per year on the highest peak. Only 30% of the total land area is suitable for agriculture. In the early 1950s large estates were predominant however, by the 1970s new land development schemes saw the division of these estates into small holdings ranging from 1/2 acre to 5 acres. In addition, lands were moved from agriculture into housing development schemes to accommodate the expanding population (Table I).

The economy of Dominica is heavily dependent on the agricultural sector which accounts for approximately 24% of Gross domestic Product annually (Table II) . Banana production is the major activity and accounts for over 90% of agricultural production. The main export market is still the traditional market of the United Kingdom with one major buyer- Geest Industries PLC. Apart from being a price taker in that marketplace there has been little or no control over the disposal of the commodity. It is only recently (last twelve months) that there has been some earnest effort to take more control of the industry.[1]

BACKGROUND

Over the past ten years development strategies for Dominica have placed greater emphasis on

agricultural diversification. The original concept was to diversify away from bananas. However, recognizing the resources employed in this sector and the contribution it makes to economic growth, the thrust of the diversification was shifted to "diversification within bananas" with marginal banana farmers being persuaded to produce other non-traditional export crops. The major objectives of agricultural diversification in Dominica were to:

* Increase food self sufficiency
* Increase food security
* Improve utilization of resources
* Generate employment
* Increase foreign exchange earnings

These objectives were pursued at a national, subregional and regional level. Specific projects were undertaken to realize these objectives however the projects met with varying degrees of success. In some cases adequate resources particularly manpower, were not available. Also difficulties were encountered in transfer of technology. There were conflicts within the whole thrust of the diversification program itself. Increased foreign exchange through exports, conflicted with efforts to realize self sufficiency and food security, which are basically geared towards the domestic market. There are also conflicts between the objectives of improved utilization of resources and employment generation.

The agricultural sector has remained largely underdeveloped with many unsuccessful attempts at establishing sound agro-processing enterprises. Over the years the country has shifted from one main crop to another- sugar, coffee, cocoa, limes, grapefruit, coconut and now bananas. Large scale agricultural production began with the growing of sugar cane which was processed into sugar, rum and molasses. Resources were then shifted into coffee and cocoa with only preliminary processing to prepare the commodities for shipment to the overseas markets where they were further processed. There has also been production of bay leaves which have been processed into bay oil and bay rum- but with the majority of the product being shipped out as a first stage processed product. More recently, the country became involved in the processing of coconut into coconut oil, soap and animal feed.

There has also been the production of limes which were processed into lime juice and lime oil. After difficulties in that sector, grapefruits were also processed into juice concentrate utilizing the lime processing equipment. A serious downturn in the market forced the closure of the factory, producing the citrus concentrates and oils. The latest crop for processing has been aloes which lasted for a period of seven years from the introduction of the crop to the setting up of the factory, for processing and its subsequent closure. Other products being processed currently but on a smaller scale are guava, passion fruit, coffee, tea and hot pepper.

Small ex-colonial territories like Dominica face an uphill battle in their pursuit of agricultural diversification. This dilemma is as a result of a number of inherent structural factors as well as factors external to the sector. Some of these factors are:

(i) As a result of the colonial experience the agricultural sector was directly related to the mother country not only in terms of ownership of the land but also in terms of the marketing arrangements which were closely linked with special companies in the UK. The ancillary services were also owned by the same companies or related ones;

(ii) The economy is dependent on external resources for funding and technical assistance;

(iii) There has been a lack of understanding of the role of the agricultural sector in bringing about full economic independence;

(iv) The training and orientation of the managers in the key economic sectors has been white collar oriented/very academic and non-entrepreneurial;

(v) The services sector in the country has been largely underdeveloped;

(vi) The small size of the domestic market dictates that in order to achieve economies of scale, production must be geared almost entirely to export trade. The small size also poses limitations in terms of development of the necessary ancillary services. No other crop could sustain a viable support services industry. The distortion in the development process of the country resulted in the services meager as they were, to be centered entirely around the main crop, to the exclusion of almost every other one. This distortion has serious repercussions on a small island state. Being small is only part of the problem but to have a distorted economic base, exacerbates the situation, in terms of overall competitiveness;

The limited size of the domestic market(and here even if we include regional to mean domestic) also makes it difficult to attract the type and size of investment required to drive the economy. Services may be present but they are generally inefficient and costly. The Banana Industry has not expanded forward into a key service like transportation(although it has been said that the farmers of the Windward Islands have paid many times over for the initial investment made by the major provider of transportation to the United Kingdom- Geests Industries);

(vii) The production in the agricultural sector is dominated by a large number of small farmers who are generally inefficient. Servicing these farmers is costly and the view has been expressed that the cost outweighs the benefits to be derived.

These factors have prevented us from being market driven and have impacted directly on our competitiveness. Given the very dynamic and very competitive market place, the challenge for a small island like Dominica is, to be as flexible as possible, in order to survive and to generate surpluses.

CONSTRAINTS TO AGRICULTURAL DIVERSIFICATION

As producers of primary agricultural commodities there has been a failure to recognize the various stages in the growth/product life cycle. Hence, there has been a failure to plan for the maturity and decline stages of the product. Even where the country had been the lead supplier e.g. limes, very little thought was given to the possibility that limes might have been replaced by another product. The experience with bay oil and vanilla is similar as the demand for synthetic products became greater.

The assumption has been made that the consumer will always want a particular product. Because of a lack of marketing drive, as well as an appreciation of market forces and variables, those in control have kept their eyes on their product and not on the needs and wants of the market. In terms of fruits and vegetables the market wants variety, good taste, good eating quality, long shelf life, easy access, wholesomeness and generally value for money.

Today with the globalization of the marketplace, consumers are exposed to a wide range of products. What was considered to be very exotic and capable of attracting a premium price, has rapidly attained its maximum in terms of profit returns. In other cases, because of the availability of a wide range of products, consumers are simply not willing to pay a very high price for any one product. In addition, given the perishable nature of the product, there is a limit to the length of time that the product can be kept, to work the market. Even in cases where large sums of money

have been invested, to store these products in cool chains, one wonders whether they will ever cover their costs. The cost of marketing products, is ever increasing with the result that margins are being squeezed. The ratio of marketing cost to production cost has now shifted from 2:8 to 8:2. Without investments in the downstream activities, there is little profit to be generated, by simply selling the fresh product.

The globalisation of the market place is also taking place in the Caribbean. The services and infrastructural support are not geared towards facilitating interisland trade but rather international trade. The regional Hotel sector is geared towards central purchasing out of Miami and other international ports. The cruise ship sector which recently has been growing, is also geared towards central purchasing. Dominica is making a valiant effort to penetrate these markets in spite of the difficulties. Even the supermarkets are tending towards purchasing mixed container loads from Miami.

The real challenge therefore is the ability to market the products that we may be able to produce. The history of marketing arrangements in Dominica has emanated from colonial ties. These ties have also impacted on the development of services in the society. Agricultural marketing as indeed import and export trade, have always been related to the mother country. The key services have been linked from one time or another to the main crop.

Another marketing dilemma which has impacted upon the agricultural sector, is the negative campaign which has been waged against crops like coconuts, by industries in the United States. During the period 1970-1980, Dominica embarked upon a major coconut rehabilitation and expansion program. The international market place waged a war against coconut oil indicating that the product was high in cholesterol and was therefore bad for one's health. Similar campaigns have been waged against products such as coffee during periods of high world market prices. It is obvious that the strong agricultural lobbies in first world countries like the USA, are factors which must be considered in developing our marketing strategies. The cost implication of waging a counter campaign is significant for a small country like Dominica.

Apart from the marketing arrangements all the critical services have been skewed towards the exporting of the main crop. Education has been oriented towards white collar jobs and not to the development of an entrepreneurial culture. At the university level ,the research undertaken has not been related to the socioeconomic needs of the society. The education system which was modelled on the British system has allowed for academic freedom without realizing that the needs of industry should be critical in directing research. In most agricultural regions in the first world, research is directly related to the needs of the sector. Industry supports research through grants and scholarship programs. Regional Universities have only recently begun to respond to the needs being expressed by the agricultural sector in countries such as Dominica.

Governments in the Caribbean region have also pursued policies which have had a negative impact on the diversification efforts - protectionism in the manufacturing sector and import substitution policies of the past have resulted in high local cost of services and goods critical to the production sector, with the result that Dominica has not been very price competitive. Because of the limited resources available for developmental programs, scarce resources are spread out much too thinly, to have any meaningful impact.

The tendency, to look externally for solutions, have allowed us to adopt a number of technical assistance programs from the French, English, Canadians, Americans and Taiwanese. Funding has been received for the development of crops without commensurate funds for marketing of the products. It was assumed that whereas assistance could be given to farmers for producing the crops, a magical private sector would deal with all the marketing functions (Tables III and IV). Decision making for the crops to be developed was based on the availability of funds from external funding agencies rather than at the enterprise level on sound business principles. Scarce human resources are stretched across the various funding agencies in counterparting staff. Much time is spent reporting in various formats and styles, required by each agency. Years are spent preparing projects, with various teams of experts reviewing information again and again. The review of the

information is not usually based on strong business principles.

There has also been a lack of coordination between the three critical elements of the agricultural sector i.e. production, marketing and research. No coordinated system has been developed to ensure that profits generated are reinvested in the sector. The lack of coordination is evident by the absence of investment in research and development of agricultural products by domestic companies and the noninvolvement of most agro-processing firms in production.

The assumption that the agricultural sector could be all things to all persons and could exist in a vacuum has been prevalent. It was not recognized, that the sector existed within the economic structure of the country and as such economic policies can either enhance or hinder its performance.

THE WAY FORWARD

There are a number of factors which impinge on agriculture diversification in Dominica. Some of these factors affect the process at the level of the producers of the commodity and others at the level of the distributor and/or processor of the commodity. At the level of production, the diversification program is affected by:

(i) the choice of crops;
(ii) land availability;
(iii) level of technology;
(iv) land suitability;
(v) farmer commitment and attitude towards risk;
(vii) support measures in production, marketing and research

At the production level the crops being pursued were mostly mature ones. More recently new crops such as spices and exotic fruits were added to the list, but the quantities grown, were not sufficient to create an impact on the market place. The technology even though available, is not always applied or can be very costly on such a small scale. The land available to the farmers, who were interested in growing the new crops, were not always the best, and on the other hand the size of the parcels of land, prevented any meaningful production volume. Directly related to size of land parcels, is the level of risk taken by the farmers. Because the level of commitment associated with any one crop is so small, the farmers can go in and out of the crop without incurring significant losses. This attitude creates tremendous problems for persons and agencies attempting to organize these crops for marketing.

As indicated earlier, the services critical to the development of the other crops are not present. The key services, even though available for bananas, do not belong to the local industry, and cannot be commandeered towards the support for the other crops. The most important elements being the infrastructural support and marketing support. Although the research function is controlled by the banana industry, the services have not been made available to other crops. The economies of scale which should obtain to make Dominican products more price competitive cannot be achieved.

Public-sector intervention in the agricultural sector takes place in the three critical areas referred to above-research, marketing and production. At the national level the Ministry of Agriculture is responsible, for the education of farmers and transfer of technology. The Dominica Export Import Agency (DEXIA) is responsible for the promotion of exports and facilitating the movement of crops through the private sector. At a regional level the Caribbean Agricultural Research and Development Institute (CARDI) is responsible for research through country offices. The Agricultural Diversification & Coordination Unit of the Organization of Eastern Caribbean States (OECS) is responsible for critical support both to the production and marketing modules.

Is agricultural diversification sustainable in small island states? A USA based consumer

group has stated that "trade and a sustainable environment are incompatible."[2] Given current global trends in environment protection and management, and the threat of been ostracized by the world community if one does not adhere to the principles of sustainable development, how realistic it is for small island states to pursue an agriculturally driven economy - monoculture or diversified base? The international market place is demanding adherence to international standards, in quality of products, labelling and packaging. Compliance to these standards and other market entry requirements have to be certified by an internationally recognized body. The responsibility, for ensuring that the products meet market requirements is entirely that of the exporting country. In the food sector these requirements can be very onerous and costly. (One recalls the incident of the contaminated grapes from Chile).

There are a number of critical questions which must be examined before a definitive statement can be made on the outputs of an agricultural diversification program in a small island state like Dominica. Given the critical economic climate prevailing at this time, can the right type of investment be attracted? Is it possible? Are the resources available to create the enabling environment, that is needed? Is it economically viable to produce crops for agro-processing? Can markets, for which there are preferential access, be penetrated successfully, without the key services such as marketing and transportation?. What is our real competitive advantage? Are there any? For which crops is there a competitive advantage? Which markets are to be targeted? Is the present structure and function of government compatible with economic development and finally are island states economically viable?

It is quite clear that any strategy to achieve the objectives of agricultural diversification must be a comprehensive one. Development programs for any crop must include all the necessary linkages, in relation to production, marketing, research and development and the critical support services e.g. transportation.

The banana industry, should have diversified both in terms of the expansion of the product range through agro-processing and by expanding downstream into the services associated with the product, for example marketing, transportation and packaging. The diversification program has been emphasizing the non-sole-dependence on bananas without attempting to examine structure and function of the banana program.

The firm of Dominica Coconut Products LTD. is a very good example of a local firm that has diversified its product base. This firm is a major exporter of non-traditional products i.e. soaps and toiletries and coconut oil. The name "Coconut Products" is significant, however, if one went into the factory today one would find a variety of products which have no direct connection with coconuts, but use the same services, the same basic equipment e.g. laboratory services.

Increased productivity within the fresh fruit trade is also very important. If real diversification is to take place, then the process should be started within the crop itself. To simply expand the range of crops grown, without any further development, does not fulfill the mandate of diversification. Both primary products and products which have generally reached the mature phase of their life cycles, are usually not great earners of profit. Even the new exotics are no longer attracting the kind premium prices they once did. There has been a rapid movement through the product life cycle with the result that the initial investment in producing and promoting the crop can no longer be recouped. The hard exotics never quite made it to the mainstream market and has been predicted not to do so in the near future.

Further expansion of the agricultural sector is dependent on aggressive marketing organizations, linked to a secure production base ,within an environment conducive to sustainable growth and development. Three vital functions must be present and properly coordinated- namely research, production and marketing at the level of the enterprise. The services such as transportation, finance and communication which are vital to the support of the development of any sector, must be available.

In the international marketplace, consumers have developed very sophisticated tastes and demand products of high quality. At the same time, large multinationals are able to influence these tastes,

through sophisticated promotional campaigns. These multinationals have invested in production and marketing as well as agro-processing and downstream services such as transportation, marketing and research and development. These companies, are about the only ones that can survive the downturn in the market for fresh and processed agricultural products. If small states are to compete successfully, then the entire economy must be market driven with forward and backward linkages in key sectors to allow for sustainable growth and development in the agricultural sector. Agriculture cannot remain viable simply by expanding the range of crops grown. The finance required to drive the economy cannot come from only primary production or limited processing of the primary products. Product differentiation must be extensive. There must be the development of complementary services to support the efforts in the agricultural sector.

Diversification should take place within the crop through agro-processing, at the farm level through increased productivity of crops cultivated, at a company level through the provision of the goods and services and at the national level, by development of all sectors. At the level of the crop, diversification should take place with both forward and backward linkages, with the development of the ancillary services, and with farmers as investors in all the critical elements, ensuring that they can benefit to the maximum. At the level of the enterprises engaged in agro-processing, a similar diversification should take place, with enterprises, always seeking to be responsive to the market place and at the same time not becoming a dinosaur. At the level of the economy, it is not prudent to rely on one sector, even if that sector is diversified. For that main sector itself, to survive, it needs to exist in a vibrant healthy economy. One where services and goods are produced as competitively as possible, are interdependent and give critical support to each other.

TABLE I

SUBDIVISION OF ESTATES

ESTATES	TOTAL AREA (acres)	No. of Lots by Size (acres)						TOTAL LOTS
		0-5	5- 10	10-15	15-20	20-25	25-30	
Soufriere	693.68	87	10	-	-	-	-	97
Geneva	1380.	360	17	-	-	-	-	377
Melville Hall	687.77	67	48	14	15	5	2	151
Castle Bruce	1846	162	71	3	-	-	-	236
Blenheim	696	58	30	-	-	-	-	88
New-foundland	560	6	27	3	-	1	-	36
TOTAL	6000	800	200	-	-	-	-	1000

All areas are in acres
Source:Lands and Surveys Department,Ministry of Agriculture,Dominica.

TABLE II

DOMINICA
GROSS DOMESTIC PRODUCT
at Factor Costs, Constant Prices
(in millions of Eastern Caribbean Dollars)

SECTORS	1980	-	1990	1991	1992	1993P
Agriculture	64.12	-	92.49	92.49	94.65	93.03
Mining and Quarrying	1.48	-	3.08	2.60	2.92	3.04
Manufacturing	13.58	-	26.43	27.49	29.60	30.04
Electricity and Water	5.64	-	11.18	11.92	13.15	13.41
Construction	21.15	-	28.16	28.70	28.50	29.64
Wholesale and Retail	23.93	-	41.07	42.30	43.48	44.66
Hotels and Restaurants	3.07	-	7.63	8.82	8.96	10.09
Transport	18.42	-	36.18	34.94	36.72	37.78
Communications	6.87	-	23.66	28.38	31.61	33.19
Banks and insurance	28.00	-	41.65	48.88	47.81	48.78
Real Estate and Housing	11.28	-	13.51	13.77	13.91	13.95
Government Services	54.51	-	69.01	70.07	70.07	71.47
Other Services	2.85	-	3.90	3.98	4.06	4.14
Less Imputed Service Charge	14.05	-	28.11	36.03	36.40	37.13
Total	240.85	-	369.84	378.31	389.04	396.09
Growth Rate	na	-	6.34	2.29	2.84	1.81

Source: Central Statistical Office, Ministry of Finance, Dominica and OECS Secretariat.

TABLE III

AGRICULTURAL PRODUCTION
(tonnes)

CROP	1984	1987	1990	1991	1992
BANANA	41,177	67,725	66,706	66,679	58,512
OTHERS	53,575	69,131	77,556	69,038	n.a.
TOTAL	94,752	136,856	144,262	135,717	n.a.

Source: Central Statistical Office, Ministry of Finance Dominica.

TABLE IV

EXPORTS
(tonnes)

CROPS	1984	1987	1990	1991	1992
BANANA	32,632	63,682	58,603	56,740	58,024
OTHERS	5,002	5,390	5,723	5,719	7,050
TOTAL	37,634	69,072	64,326	62,459	65,620

Source: Central Statistical Office, Ministry of Finance Dominica.

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[1] Negotiations are currently taking place between the four Windward Islands and Geest Industries PLC. Areas under consideration include: price, transportation and handling of the commodity at the local ports

[2] E.Thor and N. Conklin - "Pesticide Regulation and Inter-American Trade" -1994